

Complete Summary

GUIDELINE TITLE

Practice advisory: utility of surgical decompression for treatment of diabetic neuropathy. Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology.

BIBLIOGRAPHIC SOURCE(S)

Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology, Chaudhry V, Stevens JC, Kincaid J, So YT. Practice advisory: utility of surgical decompression for treatment of diabetic neuropathy: report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Neurology 2006 Jun 27;66(12):1805-8. [28 references] [PubMed](#)

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Diabetic neuropathy

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness
 Treatment

CLINICAL SPECIALTY

Endocrinology
Neurology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To provide recommendations on the utility of surgical decompression for treatment of diabetic neuropathy

TARGET POPULATION

Patients with diabetic neuropathy

INTERVENTIONS AND PRACTICES CONSIDERED

Surgical decompression

MAJOR OUTCOMES CONSIDERED

- Subjectively reported pain
- Two-point discrimination

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A MEDLINE, EMBASE, and PUBMED literature search was conducted for all articles published between 1966 and July 2005, in the English language with the key words "diabetes mellitus," "diabetic neuropathy," and "surgical decompression." Seventy-five articles were identified by this search. An additional two articles, published in September 2005, identified after the initial search, were reviewed. Since the intent of this review was to provide a statement for length dependent sensory motor distal neuropathy, articles solely dealing with upper extremity decompressive surgery for documented entrapments were excluded. Abstracts of the articles were reviewed and 18 full articles that pertained to the topic were selected. Accompanying editorials and related discussions were reviewed for content.

NUMBER OF SOURCE DOCUMENTS

Eleven articles were identified that dealt with decompressive surgery for the treatment of diabetic neuropathy.

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Classification of Evidence for Therapeutic Articles

Class I: Prospective, randomized, controlled clinical trial (RCT) with masked outcome assessment, in a representative population. The following are required:

- a. Primary outcome(s) is/are clearly defined.
- b. Exclusion/inclusion criteria are clearly defined.
- c. Adequate accounting for dropouts and crossovers with numbers sufficiently low to have minimal potential for bias.
- d. Relevant baseline characteristics are presented and substantially equivalent among treatment groups or there is appropriate statistical adjustment for differences.

Class II: Prospective, matched, group cohort study in a representative population with masked outcome assessment that meets a–d above OR a RCT in a representative population that lacks one criterion a–d.

Class III: All other controlled trials including well-defined natural history controls or patients serving as own controls in a representative population, where outcome assessment is independently assessed or independently derived by objective outcome measurement (an outcome measure that is unlikely to be affected by an observer's [patient, treating physician, investigator] expectation or bias [e.g., blood tests, administrative outcome data]).

Class IV: Evidence from uncontrolled studies, case series, case reports, or expert opinion.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Evidence tables were constructed from 10 selected articles which dealt directly with surgical decompression in human subjects with diabetic neuropathy.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Other

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The Therapeutic and Technology Assessment Subcommittee (TTA) oversees the development of American Academy of Neurology (AAN) technology assessments and therapeutic assessments, which are evidence-based statements that assess the safety, utility and effectiveness of new, emerging, or established therapeutic agents or technologies in the field of neurology. Technology assessments and therapeutic assessments are developed through a rigorous process of defining the topic, evaluating and rating the quality of the evidence, and translating the conclusions of the evidence into practical assessments that can be used to guide the use of technologies and therapeutic agents in the practice of neurology.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Classification of Recommendations

A = Established as effective, ineffective, or harmful for the given condition in the specified population (Level A rating requires at least two consistent Class I studies.)

B = Probably effective, ineffective, or harmful for the given condition in the specified population (Level B rating requires at least one Class I study or at least two consistent Class II studies.)

C = Possibly effective, ineffective, or harmful for the given condition in the specified population (Level C rating requires at least one Class II study or two consistent Class III studies.)

U = Data inadequate or conflicting given current knowledge, treatment is unproven.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This practice advisory was approved by the Therapeutics and Technology Assessment Subcommittee on October 23, 2005; by the Practice Committee on April 5, 2006; and by the American Academy of Neurology (AAN) Board of Directors on May 4, 2006.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions of the strength of the recommendations (A, B, C, U) and classification of the evidence (Class I through Class IV) are provided at the end of the "Major Recommendations" field.

Conclusions and Recommendations

- There are inadequate data concerning the efficacy of decompressive surgery for the treatment of diabetic neuropathy. Given our current knowledge, this treatment is unproven (**Level U**).

Definitions:

Classification of Recommendations

A = Established as effective, ineffective, or harmful for the given condition in the specified population (Level A rating requires at least two consistent Class I studies.)

B = Probably effective, ineffective, or harmful for the given condition in the specified population (Level B rating requires at least one Class I study or at least two consistent Class II studies.)

C = Possibly effective, ineffective, or harmful for the given condition in the specified population (Level C rating requires at least one Class II study or two consistent Class III studies.)

U = Data inadequate or conflicting given current knowledge, treatment is unproven.

Classification of Evidence for Therapeutic Articles

Class I: Prospective, randomized, controlled clinical trial (RCT) with masked outcome assessment, in a representative population. The following are required:

- a. Primary outcome(s) is/are clearly defined.
- b. Exclusion/inclusion criteria are clearly defined.
- c. Adequate accounting for dropouts and crossovers with numbers sufficiently low to have minimal potential for bias.
- d. Relevant baseline characteristics are presented and substantially equivalent among treatment groups or there is appropriate statistical adjustment for differences.

Class II: Prospective, matched, group cohort study in a representative population with masked outcome assessment that meets a–d above OR a RCT in a representative population that lacks one criterion a–d.

Class III: All other controlled trials including well-defined natural history controls or patients serving as own controls in a representative population, where outcome assessment is independently assessed or independently derived by objective outcome measurement (an outcome measure that is unlikely to be affected by an

observer's [patient, treating physician, investigator] expectation or bias [e.g., blood tests, administrative outcome data]).

Class IV: Evidence from uncontrolled studies, case series, case reports, or expert opinion.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate utility of surgical decompensation for treatment of diabetic neuropathy

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This statement is provided as an educational service of the American Academy of Neurology (AAN). It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources
Quick Reference Guides/Physician Guides
Staff Training/Competency Material

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology, Chaudhry V, Stevens JC, Kincaid J, So YT. Practice advisory: utility of surgical decompression for treatment of diabetic neuropathy: report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Neurology 2006 Jun 27;66(12):1805-8. [28 references] [PubMed](#)

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2006 Jun

GUIDELINE DEVELOPER(S)

American Academy of Neurology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Neurology (AAN)

GUIDELINE COMMITTEE

Therapeutics and Technology Assessment Subcommittee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The authors report no conflicts of interest.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: A list of American Academy of Neurology (AAN) guidelines, along with a link to a Portable Document Format (PDF) file for this guideline, is available at the [AAN Web site](#).

Print copies: Available from the AAN Member Services Center, (800) 879-1960, or from AAN, 1080 Montreal Avenue, St. Paul, MN 55116.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- AAN guideline development process [online]. St. Paul (MN): American Academy of Neurology. Available from the [American Academy of Neurology \(AAN\) Web site](#).
- Utility of surgical decompression for treatment of diabetic neuropathy. AAN summary of evidence-based guideline for clinicians. St. Paul (MN): American Academy of Neurology. 2 p. Available in Portable Document Format (PDF) from the [AAN Web site](#)
- Utility of surgical decompression for treatment of diabetic neuropathy. CME quiz. Available online to subscribers of *Neurology* at the [Neurology Web site](#).

PATIENT RESOURCES

The following is available:

- Surgical decompression for treatment of diabetic neuropathy. AAN summary of evidence-based guideline for patients and their families. St. Paul (MN): American Academy of Neurology (AAN). 1 p.

Electronic copies: Available in Portable Document Format (PDF) from the [AAN Web site](#).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on October 2, 2006. The information was verified by the guideline developer on November 1, 2006.

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